



2022 Environmental, Social, and Governance Report

PDF Solutions, Inc.

April 26, 2023

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Introduction to the Report

This 2022 Environmental, Social, and Governance (“ESG”) Report covers the operations of PDF Solutions, Inc. (“PDF Solutions,” “PDF,” or the “Company”) for fiscal year 2022, which began on January 1, 2022, and ended on December 31, 2022, unless otherwise noted.

Throughout this report, we define ESG as a way of categorizing factors that impact a company’s performance as well as a strategy for integrating these factors into the business to operate in a sustainable manner.

The contents of this report are informed by our ESG Priority Assessment, which leveraged leading sustainability reporting standards and frameworks, including the Sustainability Accounting Standards Board (“SASB”), the Global Reporting Initiative (“GRI”), and the Task Force on Climate-Related Financial Disclosures (“TCFD”).

This is PDF’s first ESG Report. It has been prepared in alignment with disclosure topics included in the SASB Software & IT Services Standard and the Electrical & Electronic Equipment Standard.

About PDF Solutions

PDF Solutions, Inc. (NASDAQ: PDFS) provides comprehensive data solutions designed to empower organizations across the semiconductor ecosystem to improve the yield and quality of their products and operational efficiency for increased profitability. Our customers include Fortune 500 companies across the semiconductor ecosystem.

PDF Solutions was first incorporated in Pennsylvania in 1992, and we reincorporated in California in 1995. In 2000, we reincorporated in Delaware, and in 2001, we completed an initial public offering.

From 2000 through 2009, we expanded our technology footprint and our operations in various countries through acquisitions. From 2009 to 2019, we primarily focused on the pervasive application of our technology to leading edge logic manufacturing and achieving yield targets with our clients that maximized Gainshare royalties. In 2013, we leveraged our extensive experience in yield simulation software and CV® test chip development and started research and development on an e-beam solution for non-contact, inline electrical inspection and process control for wafer inspection. The first-generation e-beam tool for DFI™ was completed in 2015, and the second generation was commercially deployed in 2019. In a parallel effort, starting in 2014, we re-architected our point-solution software tools into a new generation, highly-integrated data analytics Exensio platform, which resulted in accelerated growth in our software business through 2019. In December 2020, we completed the acquisition of Cimetrix and began providing software products based on open standards for equipment control and connectivity to equipment manufacturers and factories.

A Message from Our CEO

Dear PDF Solutions Stakeholders,

PDF Solutions is in its fourth decade as a leading provider of comprehensive solutions designed to empower our customers across the semiconductor ecosystem. From general purpose chips to leading edge logic manufacturing, our mission is to provide innovative solutions to create, access, and organize data to enable analysis and control for semiconductor and electronics companies to achieve better time-to-market, yields, quality, and operational efficiencies.

We believe that the global semiconductor industry is at an inflection point, with the need to balance the rapidly growing demand for computing power with sustainability-, regulatory-, and market-related pressures. This inaugural ESG report provides an initial disclosure regarding the development of our strategy to address these pressures and to realize related opportunities.

As part of this strategy, we are seeking to embed ESG into our operations and the development of our products. We are excited to share our inaugural ESG Report and present our initial steps toward the development of our ESG strategy.

Environmental Challenges in the Semiconductor Industry

The semiconductor industry faces significant challenges as part of the transition to a green economy. We recognize the significant environmental challenges faced by the semiconductor industry and believe that our solutions will be instrumental in helping semiconductor and other companies improve their environmental sustainability performance. Our solutions help drive reductions in the consumption of power, water, and materials by improving our customers' yield and time-to-market. We are committed to helping our customers improve their environmental sustainability performance through our solutions and look forward to helping our customers drive progress on their climate-related and other environmental goals.

Emerging Regulatory Risks and Opportunities

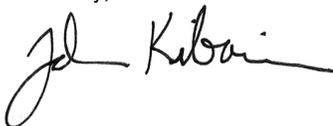
Global regulatory developments represent a new set of risks and opportunities for our industry. We are evaluating the potential benefits of these regulatory developments to our business and we believe that our solutions can play a vital role in the successful development of new and more sustainable semiconductor manufacturing capacity around the world.

Helping to Stabilizing Our Customers' Supply Chain

Despite recovered levels of production across the industry, global shortages of semiconductors and associated supply chain disruptions remain a persistent risk. Legacy effects of the COVID-19 pandemic continue to shape how we and our customers operate our businesses and the ongoing Russo-Ukrainian war is negatively impacting the global supply chain. Our solutions enable our customers to address these challenges by pushing their analytics to the edge of their global supply chains, which we believe will further increase our customers' ability to improve product yield, quality, performance, and profitability.

We will remain focused on helping our customers succeed and driving stockholder value. We believe embedding ESG into our operations and products will support the success of our business and help us implement our mission.

Sincerely,



Dr. John Kibarian
CEO, President, and co-founder

PDF Solutions' Approach to ESG

At PDF Solutions, we believe that effectively managing ESG risks and opportunities can help us to operate more sustainably, better serve our customers, including by helping our customers achieve their ESG goals.

We recently took key strategic steps to further develop our ESG program. In 2021, we established formal board oversight of ESG by revising the charter of the Nominating and Corporate Governance Committee of our Board of Directors (“NCG Committee”). In 2022, we engaged an independent third-party to conduct an ESG Priority Assessment to identify the ESG priority topics that are important to internal and external stakeholders. In addition, in February 2023, we formed a management-level ESG Steering Committee comprised of representatives from various functions, including product development, engineering, operations, finance, human resources, and purchasing.

The ESG Steering Committee was formed to (i) establish programs, policies, and practices relating to ESG matters, and (ii) assist the NCG Committee in fulfilling its oversight responsibilities with respect to ESG matters.

We continue to work as an organization to develop our strategic ESG roadmap by identifying and advancing key ESG workstreams. This inaugural report provides a summary of our approach to ESG governance, an initial disclosure aligned with the SASB standards, and a statement on our ESG strategy. We plan to continue to report on our progress, by various means, as we identify and advance our ESG workstreams.

Our ESG strategy is by no means static. We plan to regularly review and revisit our ESG priority topics and plan to continue to develop our ESG program by identifying relevant ESG initiatives so that we can dynamically support the success of our business and the businesses of our customers by addressing those topics that make our businesses more sustainable. We believe that advancing the interests of our stakeholders, which include our customers, supports the success of our business. As we continue to implement our ESG program, we plan to regularly consult internal and external stakeholders to take into account the views and perspectives of those groups that are critical to our business and that we impact by virtue of operating our business, including our employees, suppliers, investors, local communities, and others.

ESG Priority Assessment

In 2022, we conducted our first ESG Priority Assessment, which we plan to use to guide our overall ESG strategy. The ESG Priority Assessment was designed to identify the environmental, social, and governance topics with the greatest impact on our business strategy, operations, and value creation, including topics that are important to our customers and business partners. Going forward, we aim to regularly assess a wide range of ESG topics to inform our strategy, with the goal of increasing the scope of our priority assessment in future reports.

Our Methodology

Together with an external ESG specialist, we conducted desktop research and external benchmarking to identify ESG topics that are relevant to our company, industry, and key stakeholders.

The ESG Priority Assessment included data collection from a variety of sources and methods, including:

- A review of our sustainability context, including sustainability challenges and ESG priorities for the semiconductor industry, the nature of our business operations and where we operate around the world, to identify ESG topics that are relevant to our business.
- Leading ESG standards and frameworks, including the SASB standards, the GRI, and the recommendations of the TCFD.
- Assessments of ESG ratings and rankings for our company and peers, together with external benchmarking against the ESG priorities and disclosure of our peer companies and companies in the technology and semiconductors industry that are identified as best in class according to third-party ESG ratings and rankings.
- A review of the ESG priorities of our investors through a review of their proxy voting guidelines, voting records, stewardship principles, ESG policies, and other disclosures.

Through this process, we identified a list of 29 relevant ESG issues and opportunities that were consolidated into 12 ESG topics using the outputs from our business analysis, peer benchmarking, and review of investor priorities.

To prioritize the 12 ESG topics, we engaged with members of our leadership team and internal technical specialists closest to relevant issues and opportunities. Using questionnaires and targeted interviews, we collected data on the relative importance of the ESG topics and their potential impacts on our business.



Our priority ESG topics were then validated through engagement with our leadership and presented to our Board of Directors.

The resulting ESG topics, in order of highest priority to our business, are as follows:

- Data Security
- Human Capital Management
- Corporate Governance
- Public Policy
- Risk Management
- Business Ethics
- Diversity, Equity, and Inclusion
- Sustainable Products
- Responsible Sourcing
- Impact and Local Communities
- Environmental Sustainability
- Climate Change

This inaugural ESG Report describes the initiatives that are in alignment with the priority ESG topics and includes relevant metrics aligned with the SASB standards. As we continue to develop our ESG strategy and goals, our aim is to increase the scope of our program and our reporting to cover more of our priority topics.

ESG Oversight

Given the importance of ESG to the long-term success of our business, our Board and its committees play a critical role in overseeing ESG matters.

Board of Directors

The Board is responsible for (i) oversight of ESG risks and opportunities and (ii) the integration of ESG into strategy, to the extent material to the business.

NGC Committee

The NCG Committee reviews and evaluates the Company's programs, policies, practices, and disclosures relating to social and environmental issues and impact to support the sustainable growth of the Company's businesses.

CHCM Committee

The CHCM Committee oversees the development, implementation and effectiveness of the Company's policies and strategies relating to human capital management, including but not limited to policies and strategies regarding recruiting, selection, career development and progression, and diversity and employment practices.

Audit Committee

The Audit Committee, on behalf of the Board, oversees and discusses with management and the independent auditor the principal enterprise risk exposures facing the Company and the Company's mitigation, control and monitoring efforts in respect of such risks, including, but not limited to environmental and sustainability risks.

The Audit Committee also reviews cybersecurity risks, incidents, the adequacy and effectiveness of the Company's information and cyber security policies and the internal controls regarding information and cyber security and any other risks and incidents relevant to the Company's computerized information system controls and security.

Management-Level ESG Steering Committee

The purpose of the management-level ESG Steering Committee is to (i) establish programs, policies and practices relating to ESG matters and (ii) assist the NCG Committee of the Board in fulfilling its oversight responsibilities with respect to ESG matters. The ESG Steering Committee is chaired by the General Counsel.

Environmental Sustainability

PDF Solutions is committed to addressing environmental sustainability in its business activities. Our approach to environmental sustainability considers both our own operations and the significant indirect environmental impact that our products can have on our customers' operations. Our products drive efficiencies for our customers, which can indirectly lower their environmental footprint. In the future, we may work to identify and measure the direct environmental benefits of our products.

Product Sustainability Strategy

We work with some of the largest logic semiconductor manufacturers in the world to help improve the time-to-market and yield of their manufacturing processes. Our products and services can indirectly help to reduce our customers' consumption of natural resources, including energy, water, and silicon, with significant indirect impacts on waste and greenhouse gas (GHG) emissions.

We implement hybrid or on-cloud solutions for semiconductor manufacturers' process control and manufacturing analysis. These solutions use less energy than traditional on-premises IT infrastructure, reduce waste such as paper, and enable remote work, reducing the need for commuting and travel.

We believe sustainability will play an increasing role in our customers' priorities as they seek to decarbonize their operations. Helping our customers achieve their environmental sustainability goals may represent an opportunity for us. Moving forward, we intend to review the direct and indirect environmental benefits of our solutions and to assess opportunities to integrate environmental factors into the development of new products.

Sustainability Strategy

We strive to protect the environment through sound business and operations management practices and decisions.

We look for opportunities to conserve energy, reduce consumption of natural resources, preserve air, soil, and water quality, manage waste properly, and reuse and recycle. We also aim to reduce the use of toxic substances in our operations where possible, including in our clean room and lab facilities.

In 2020, we began the process of ISO 14001 certification of our clean room facility, which provides a specific framework for implementing our environmental management system.

Periodically, we conduct self-assessments regarding the environmental protection measures that we have in place in our facilities. We are currently measuring and evaluating our use of energy, water, and the generation of waste in our clean room and lab facilities.

Our Board holds the highest level of responsibility related to our environmental strategy. The Board has delegated this responsibility to the Nominating and Corporate Governance Committee.

Our newly formed management-level ESG Steering Committee, which includes members of our executive leadership team and internal experts with knowledge of relevant environmental topics, was formed to (i) establish programs, policies, and practices relating to ESG matters, and (ii) assist the NCG Committee of the Board in fulfilling its oversight responsibilities with respect to ESG matters. The ESG Steering Committee is chaired by the General Counsel.

Environmental Challenges in the Semiconductor Industry

The semiconductor industry faces significant challenges as part of the transition to a green economy, including direct environmental impacts from the manufacturing of ICs.

Large amounts of energy are needed to operate tools across IC manufacturing, assembly, test, and packaging processes. Foundries also consume large amounts of energy to operate clean rooms with strict climate and humidity controls. The amount of energy required at scale is often significant, with some individual foundries consuming more energy than major cities. Scope 2 greenhouse gas emissions, which come from purchased energy, heating, and cooling, account for 45% of the semiconductor industry's emissions, on average.

Other direct environmental impacts from manufacturing ICs include the use of GHGs in the manufacturing process. The direct use of GHGs in the manufacturing process for ICs, including a variety of high global warming potential fluorinated compounds, accounts for approximately 28% of the semiconductor industry's emissions, on average. Other environmental impacts are caused by the significant use of ultrapure water and silicone, which in turn require large amounts of energy to produce and transport.

The large amount of GHG emissions generated from chip manufacturing account for the plurality of lifecycle emissions for most consumer electronic devices, with greater emissions from the IC manufacturing process than from energy consumption over the lifecycle of many electronics. As major purchasers of semiconductors transition their own operations to renewable power, GHG emissions from manufacturing the ICs that these companies purchase may represent a plurality of their total GHG emissions. The information and technology sector as a whole is expected to account for 14% of global GHG emissions in 2024, up from 1.5% in 2007, with ICs accounting for a significant portion of additional GHG emissions in the IT sector.

We recognize the significant environmental challenges faced by the semiconductor industry and believe that our solutions will be instrumental in helping semiconductor and other companies improve their environmental sustainability.

Sustainable Operations

We look for ways to reduce energy consumption in our facilities, in particular, our headquarters, clean room, and lab, including upgrades and/or retrofits to LED and/or motion detector lighting and smart HVAC systems.

Some of our facilities, including our headquarters, clean room, and lab, have been remodeled within the last four years and have features such as LED lighting, motion detector lighting, and smart thermostats.

Additionally, we are piloting a system to track and monitor energy consumption in our clean room and lab facilities.

We do not use water in our product development and manufacturing processes. We only use water for kitchens and restrooms, which all have low flow valves.

Our lab and clean room facilities do not produce any off gas or emissions. The only reportable, hazardous material that we use in our clean room is liquid nitrogen. The liquid nitrogen is stored in a tank external to our building and monitored using telematics by an independent third-party specializing in such activity.

Human Capital Management

We believe we have a responsibility to foster a healthy, balanced, and ethical work environment for everyone in our organization through sound ethical and organizational governance, by promoting business ethics and integrity, and by embracing equality, diversity, and inclusion throughout our organization and even extending to the board room.

As of December 31, 2022, we had 458 employees worldwide, including 158 field application engineers and consultants, 155 in research and development, 85 in sales and marketing, and 60 in general and administrative functions. Of these employees, 258 are located in North America, 166 in Asia, and 34 in Europe.

Our commitment to human capital management is embedded in our governance structure.

At the Board level, our Compensation and Human Capital Management Committee is tasked with oversight of the development, implementation and effectiveness of the Company's policies and strategies relating to human capital management, including strategies regarding recruiting, selection, career development and progression, and diversity and employment practices.

Talent Development

We are committed to the development and growth of our employees because we believe this is crucial for our long-term success. This includes offering training, mentorship, and other development opportunities to further enhance the talent we have today, but also entails having the right skill sets for our future.

To this end, we are working to implement a planned set of actions around increasing formal programs to achieve these goals.

We believe that our team of engineers will continue to advance our market and technological leadership. We conduct in-house training for our engineers in certain technical areas.

We also fund attendance at continuing education courses, symposia, and participation in professional organizations.

Employee Engagement

Employee engagement is crucial for the overall health of the organization. In 2023, we plan to conduct a large-scale employee survey followed by shorter pulse surveys to continue monitoring overall employee engagement.

In addition to our efforts to address employee engagement, we are committed to supporting our employees and creating an engaged workforce by prioritizing the items below:

- 1) Personal growth through training and development
- 2) Recognizing and rewarding our people for their commitment to our values and our organization
- 3) Flexible work locations and schedules
- 4) Providing a sense of organizational community by hosting online as well as in-person events where our people can gather and connect.

Health and Safety

We are committed to ensuring that proper working conditions exist for the safety of our employees, such as developing, implementing, and improving health and safety systems and conditions, and providing appropriate preparation, education, reporting, and controls. For example, we have Illness Prevention and Hazard Communication programs and an Emergency Action Plan for worker safety at our headquarters, lab and clean room facilities.

Our headquarters, lab, and clean room facilities use an independent safety consultant for the review of policies, evaluation, assessment, analysis, development of written safety process, training, reports, and research for resolving safety issues.

We have a safety handbook, and every employee located at our lab and clean room facility goes through environmental and lab safety training. Our safety consultant is on-site at our lab and clean room bi-weekly to help oversee our environmental, health and safety management. Our employees take additional safety training if required by our customers for access to their sites. Additionally, at our headquarters, clean room, and lab, we host CPR and AED classes every two years for employees to participate and become certified.

We are proud of our safety record. In 2022, we had no work-related injuries to report to the Occupational Safety and Health Administration (OSHA).

Diversity, Equity and Inclusion

We embrace equality, diversity, and inclusion throughout our organization.

We work to ensure that our business practices support diversity and inclusion to build an innovative workforce and to strive toward having our organization reflect the complexion of our customers and suppliers.

We are strengthening our diversity and inclusion programs with actions around organizational training, formalized company values, and a revitalized recruitment strategy.

We value a range of diverse perspectives with reference to our business model and specific needs, including, but not limited to, gender, age, race, language, cultural background, educational background, industry experience, professional experience and veteran and active armed service status or other similar characteristics. Our Board has adopted a diversity policy, pursuant to which we are committed to actively seeking highly-qualified individuals from minority groups to include in the pool from which new Director candidates are selected. 43% of our Board is gender diverse, and 29% of our Board is racially diverse.

Impact and Local Communities

We believe that empowering our employees to give back to our community is central to our culture and an expression of our core values. We believe in supporting initiatives that improve the communities where we work and where our employees live.

One of our most meaningful philanthropic initiatives is our annual holiday charity drive. The holiday charity drive is an organized PDF holiday gift drive as part of the Family Giving Tree's Holiday Wish Drive. In 2022, we opted for the virtual Giving Tree Platform, which allows employees to donate anonymously. The Giving Tree fulfills the wish of a child, adult, or senior in need so they may receive a gift at the holiday time. Donations can fulfill a gift wish or consist of a cash donation, so that the wishing tree can purchase the gift on the recipient's behalf.

Responsible Sourcing

We are committed to responsible sourcing in our product supply chain, including ethical production and the protection of human rights.

Although we are not a member of the Responsible Business Alliance (“RBA”) (formerly the Electronics Industry Citizenship Coalition), in 2021 in an effort to further our ESG efforts, we incorporated the RBA Code of Conduct into our Supplier Code of Conduct to supplement our Code of Ethics, including the specific policies of the RBA Code relating to labor, health and safety, environment, management systems, and ethics. A copy of the Supplier Code of Conduct is available at www.pdf.com/company/trust-center/working-with-pdf-solutions/supplier-code-of-conduct/.

We request that our suppliers adhere to the RBA Code of Conduct or an equivalent code by flowing this requirement through our commercial contracts.

We have a variety of resources available to assist suppliers with reporting questionable behavior or possible violation of our supplier standards, including our Ethics Hotline and emailing our legal department directly.

We will not tolerate any retribution or retaliation taken against any individual who has, in good faith, sought out advice or has reported questionable behavior and/or a possible violation.

We are committed to sourcing components and materials from companies that share our values around human rights, ethics, and environmental responsibility. As part of this commitment, we support the goals and objectives of Section 1502 of the Dodd-Frank Act (the “Act”).

As part of our compliance with the Act, we perform due diligence and file annual reports regarding the use of conflict minerals in our products. Accordingly, all of our suppliers are expected to comply with our Supplier Code of Conduct, which includes requirements relating to conflict minerals and responsible sourcing.

Specifically, we expect all of our suppliers to comply with the Act, and to exercise due diligence on the source and chain of custody of any tantalum, tin, tungsten or gold used in the products made for us and make their due diligence measures available to us. Under the Supplier Code of Conduct, our suppliers are responsible for passing these same requirements on to their suppliers. We seek to source products only from suppliers that comply with these requirements.

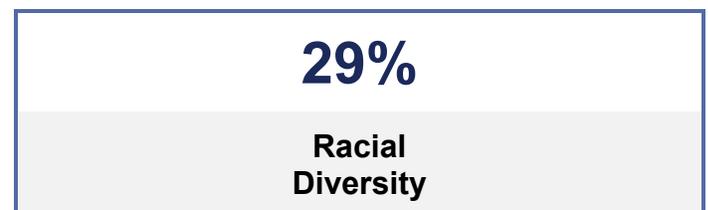
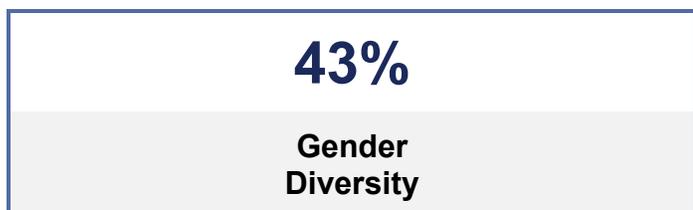
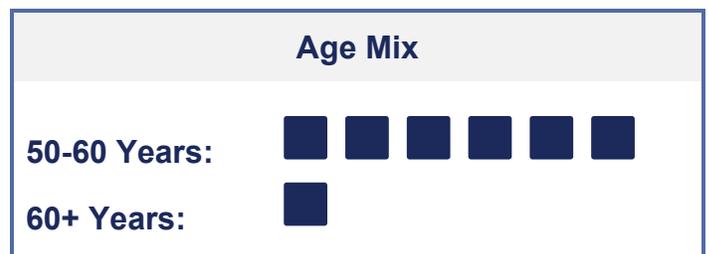
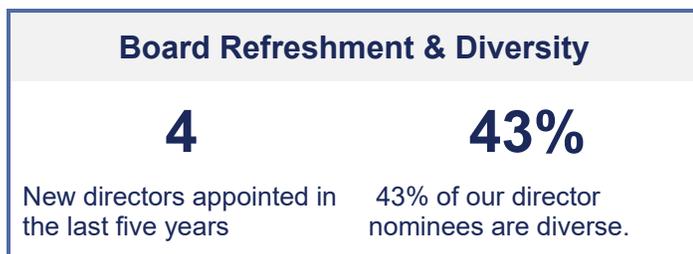
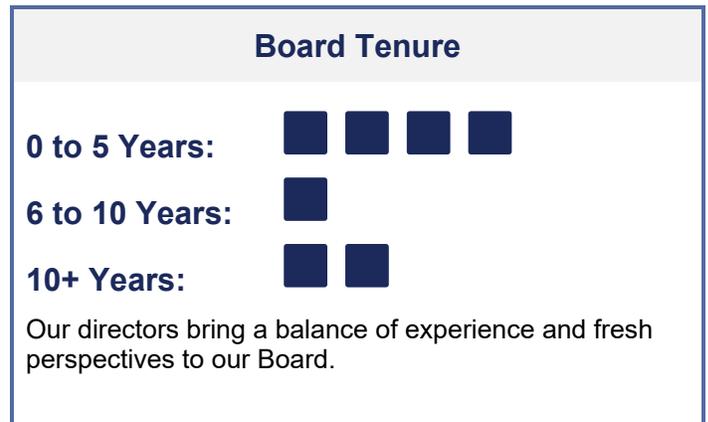
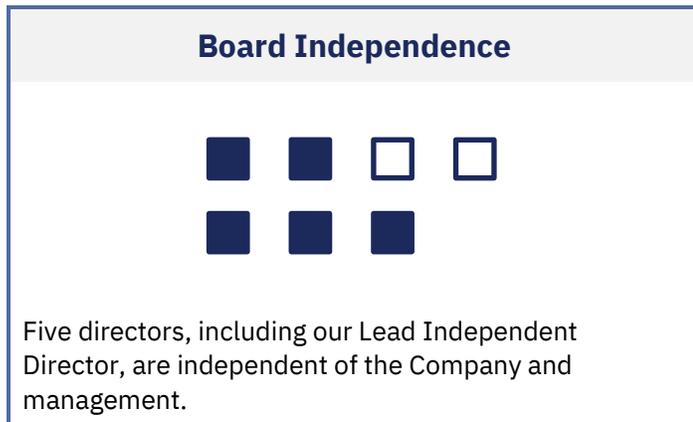
Governance

Corporate Governance

We are committed to the highest standards of corporate ethics and diligent compliance with financial accounting and reporting rules. Our Board provides independent leadership in the exercise of its responsibilities. Our executive officers oversee a strong system of internal controls and compliance with corporate policies and applicable laws and regulations. Our employees operate in a climate of responsibility, candor, and integrity.

Key highlights of the Board and corporate governance practices are:

- ☑ 100% of Director Nominees are Independent
- ☑ Separate Chair (or Lead Independent Director if Chair is vacant) and CEO
- ☑ Limit on Outside Public Company Directorships
- ☑ Annual Board and Committee Evaluations
- ☑ Regular Executive Sessions of Independent Directors at quarterly Board and Committee Meetings
- ☑ On-going Education for Directors for Issues Pertinent to the Company’s Business (e.g., export)
- ☑ Majority Voting for Director Elections
- ☑ 100% of Committee Chairs and Members are Independent
- ☑ Proxy Access Rights
- ☑ 43% of Directors are Women
- ☑ Stock Ownership Policy for Directors and Named Executive Officers
- ☑ Stockholder Engagement with Approximately 42% of the Company’s Outstanding Shares in 2022



Our Board of Directors has established an Audit Committee, a Compensation and Human Capital Management Committee, and a Nominating and Corporate Governance Committee. The composition and responsibilities of each committee are described below. Each of these committees has a written charter approved by our Board of Directors. Copies of the charters for each committee are available, without charge, in the “Investor Relations” section of our website, which is located at <https://ir.pdf.com/>. Members serve on these committees until their resignations or until otherwise determined by our Board of Directors.

Nominating and Corporate Governance Committee

Our Nominating and Corporate Governance Committee is responsible for, among other things: identifying, reviewing, evaluating, and recommending candidates to serve as directors on the Board; making other recommendations to the Board regarding affairs related to the directors of the Board; overseeing the Company’s corporate governance functions on behalf of the Board; and reviewing and evaluating the Company’s programs, policies, practices and disclosures relating to social and environmental issues.

Audit Committee

Our Audit Committee is responsible for, among other things: recommending the engagement of the independent registered public accounting firm and assisting the Board in the oversight of the qualifications and independence of the independent registered public accounting firm; monitoring the Company’s compliance with legal and regulatory requirements including preparing the audit committee report that SEC rules require to be included in the proxy statement; monitoring the performance of the Company’s internal and external audit efforts; monitoring and assessing the integrity and effectiveness of the Company’s financial and accounting organization and the performance of its system of internal accounting controls; overseeing the Company’s information security functions on behalf of the Board; and overseeing and reviewing ethics matters on behalf of the Board.

Compensation and Human Capital Management Committee

Our Compensation and Human Capital Management Committee is responsible for, among other things: establishing and administering the Company’s policies regarding annual executive compensation, including salaries, cash incentives, and long-term equity incentives; assisting with the administration of the Company’s stock incentive and purchase plans; making recommendations to the Board on non-employee director compensation; and overseeing the Company’s human capital management function on behalf of the Board.

Business Ethics and Compliance

We are committed to ensuring ethical organizational governance and promoting business ethics and integrity.

Our [Code of Ethics](#) describes the expectations for all employees, officers, and directors regarding acceptable ethical behavior at the Company.

We promote an ethical organizational culture and encourage all employees, regardless of position or level, to raise questions or concerns about actual or potential ethical issues and company policies and offer suggestions about how we can make our organization better to address concerns.

We have a Whistleblower Ethics Hotline that includes global telephone and web access together with local language support. The web portal enables online reporting of concerns, where allowed by local law, and a place to ask questions or quickly access ethics and compliance policies. We believe these efforts strengthen our ethics and compliance efforts and foster an environment where employees can express their concerns and have them resolved.

We circulate the Code of Ethics annually to all employees. Each quarter, our sales employees attest to professional conduct in accordance with the Code of Ethics by confirming compliance with our No Side-Letter Policy.

Our Board of Directors is responsible for setting the standards of conduct contained in the Code of Ethics and for updating these standards as appropriate to reflect legal and regulatory developments. The Audit Committee is charged by the Board with the authority and responsibility to assess the code of ethics and recommend any amendments or waivers for approval by the Board.

Data Security and Privacy

Information Security and Risk Oversight

We are heavily reliant on our technology and infrastructure, as well as the commercial cloud service providers to an increasing degree, to provide our products and services to our customers. As a result, we have developed an information security program (our “InfoSec Program”) to enhance our network security measures, identify and mitigate information security risk, and protect and preserve the confidentiality, integrity, and availability of critical information owned by us and that of our customers and suppliers that is in our care. Our InfoSec Program includes development, implementation, and continual improvement of policies and procedures to safeguard information and ensure availability of critical data and systems.

The program also includes:

- Annual information security awareness training for employees involved in our systems and processes that handle customer data
- Audits of our systems
- Enhanced training for specialized personnel
- Regular phishing email simulations for all employees and all contractors with access to corporate email systems
- Review and assessment by external, independent third-parties, who certify and report on our weaknesses and internal response preparedness with respect to the entire company.

Accordingly, we have instituted periodic network access penetration (“PEN”) testing no less than once per year both for our corporate network resources and our SaaS cloud-based offerings.

In May 2022, we successfully completed our annual Type II System and Organization Control (“SOC 2”) audit of our cloud-based offerings under the framework put forth by the American Institute of Certified Public Accountants (“AICPA”) in which independent, third-party auditors assess and test controls relating to the Trust Services Criteria (“TSC”) of Security, Availability, and Confidentiality and no qualified findings were found during the audit period. In January 2023, we started our next annual Type II SOC 2 audit with external auditors. To date, we have not managed ITAR-designated data, technology, or information.

In accordance with our InfoSec Program, we also actively monitor known threats that could affect our products and services and work with our suppliers to provide us with real-time reports of threats or vulnerabilities that may affect our enterprise-wide systems. Our InfoSec Program also includes a data security incident response plan that provides controls and procedures for timely and accurate reporting of any material cybersecurity incident.

The Audit Committee is tasked with oversight of certain risk issues, including cybersecurity. The Audit Committee is comprised entirely of independent directors, two of whom have significant work experience related to information security issues or oversight. Management reports security instances to the Audit Committee as they occur, if material, and provides a summary multiple times per year to the Audit Committee as well as the full Board about periodic assessment of our InfoSec Program, our internal response preparedness, and assessments led by outside advisors.

We carry insurance that provides some protection against the potential losses arising from a cybersecurity incident. In the last three years, the expenses we have incurred from information security breach incidences, including penalties and settlements, of which there were none, were immaterial.

Data Privacy

We respect the privacy rights of our employees and customers and are committed to handling personal data responsibly and in accordance with applicable laws and regulations. We use reasonable organizational, technical, and administrative measures to protect personal data from improper access, use or disclosure. Security measures and tools, such as firewalls, access control tools, network intrusion detection tools, end-point protection software, and anti-virus programs in our primary software and cloud offerings, are in place to help protect against the accidental or unlawful destruction, loss, alteration, unauthorized disclosure, or access to personal data transmitted, stored or otherwise processed. These measures vary based on the nature of the personal data we collect, process, and store, and the current state of technology.

We also take measures to ensure that third parties that process personal data on our behalf also have appropriate security controls in place. We only transfer personal data to another country or region as permitted under applicable data protection and other laws and regulations, and only if we can ensure adequate safeguards for any transfers of personal data.

Personal data is retained in accordance with applicable laws or regulatory requirements and for as long as necessary to fulfill the purposes for which the personal data was collected, plus any additional time periods necessary for the compliance with laws and regulations, exercise or defense of legal rights, and archiving, back-up, and deletion processes.

We do not sell, rent, share, or otherwise disclose personally identifiable information from customers for commercial purposes.

Please see our [Privacy Policy](#), GDPR, and our California Consumer Privacy Act (CCPA) supplements/policies, on our web site.

Risk Management

Enterprise Risk Management

Our overall risk management process is led by our General Counsel who is responsible for initiating and publishing annual risk factors by taking into account inputs from risk reviewers. The risk reviewers consist of:

- all members of our leadership team,
- all other Vice Presidents; and,
- any senior manager or director who has been nominated by their department VP as a risk reviewer.

Specific business units manage and mitigate detailed business unit risks following a NIST or equivalent framework. Our CEO, CFO, and the Audit Committee of our Board approve the risk factors published in the 10-Q and 10-K filings.

The Corporate Legal Department (CLD) conducts a review annually to identify and develop a management plan for potentially new or developing material risks. The CLD also reviews existing management plans for known material risks against occurrences in the reporting period, together with input from finance.

In addition to the yearly risk review, CLD monitors changes by the U.S. government and updates our systems to reflect the status of customers and vendors with respect to regulatory restrictions, risks related to US or other relevant country export controls and other published trade restrictions.

Business Continuity and Technology Disruptions

We maintain a data repository map and a list of business-critical systems. Owners of each critical system and each data repository are responsible for maintaining a Disaster Recovery plan or documenting compensating controls for the systems and repositories. Owners that manage significant parts of our data and systems are also responsible for testing backup and systems recovery at least once a year.

Our VP of Operations is responsible for creating and maintaining the Business Continuity Policy. The policy outlines the principles of business continuity and the parties responsible for maintaining critical business systems.

Report Conclusion

Looking Toward the Future

Going forward, we aim to continue to advance our ESG program in a gradual and iterative manner, and plan to explore additional ways of sharing our progress.

We intend to leverage the ESG Priority Assessment conducted in 2022 to guide the selection and implementation of ESG workstreams, the review of potential ESG goals, and the identification of appropriate ESG metrics.

We look forward to continuing to drive value for our company, stockholders, and extended stakeholders through the development of our ESG program.

Materiality Disclaimer

This report contains “forward-looking statements.” Forward-looking statements in this report are made pursuant to the safe harbor provisions of Section 21E of the Securities Exchange Act of 1934 and other federal securities laws. These statements are based on management’s current opinions, expectations, beliefs, plans, objectives, assumptions, or projections regarding future events or results, including, but not limited to, our ESG commitments, strategies, and initiatives; our business plans and strategy; and our stakeholder engagement efforts. These forward-looking statements are only predictions, not historical fact, and involve certain risks and uncertainties, as well as assumptions. Actual results, levels of activity, performance, achievements, and events could differ materially from those stated, anticipated, or implied by such forward-looking statements. While PDF Solutions believes that its assumptions are reasonable, there are many risks and uncertainties that could cause actual results to differ materially from forward-looking statements, including the risks discussed under the heading “Risk Factors” in our most recent Annual Report on Form 10-K and subsequent 10-Q filings with the U.S. Securities and Exchange Commission. PDF Solutions undertakes no obligation to update or revise any forward-looking statement contained in this report, except as otherwise required by law.

Any references to “priority” or “relevant” in this report are not intended to have the same meaning as the terms “material” or “materiality” in the context of financial statements or financial reporting or as defined by the securities laws of the United States.

This report contains human capital measures or objectives that may be different from or are in addition to the human capital measures or objectives that we are required to disclose in its U.S. Securities and Exchange Commission filings. For a discussion on human capital measures or objectives that PDF Solutions focuses on in managing its business, please see the “Human Capital” section in our most recent Annual Report on Form 10-K.

While we believe that our ESG initiatives are important to operating in a sustainable manner, we do not believe that such initiatives are material to our financial results and results of operations. For a discussion of the risks that we believe could materially affect our financial results and results of operations, please see the “Risk Factors” section in our most recent Annual Report on Form 10-K and subsequent 10-Q filings.

SASB Index

The table below provides content aligning to the Sustainability Accounting Standards Board (SASB) Software & IT Services Standard and the Electrical & Electronic Equipment Standard, which are most relevant to our operations and aligned with our priority ESG topics identified in our 2022 ESG Priority Assessment. Unless otherwise specified, the data and descriptions pertain to year-end 2022.

SASB Code	Accounting Metric	Response
Environmental Footprint of Hardware Infrastructure		
TC-SI-130a.1 RT-EE-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	(1) 4,108 GJ (2) 100% of our electricity is supplied from grid electricity (3) We do not currently purchase renewable energy.
TC-SI-130a.2	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Water is a critical sustainability challenge for our customers in the semiconductor industry but is not material in our own operations. Our largest facilities are located in areas with low levels of water stress, and we do not use water in our product development and manufacturing processes.
Data Security		
TC-SI-230a.1	(1) Number of data breaches, (2) percentage involving personally identifiable information (PII), (3) number of users affected	We did not experience any material data breaches in 2022. When public disclosure criteria are met, material data breaches are included in our most recent Annual Report on Form 10-K and subsequent 10-Q filings.
TC-SI-230a.2	Description of approach to identifying and addressing data security risks, including use of third-party cybersecurity standards	We maintain a robust approach to identifying and addressing data security risks. See the Data Security and Privacy section of this ESG report, our 2023 Proxy Statement, and our most recent Annual Report on Form 10-K , <i>Risks Related to Our Technology</i> page 20 for more information.
Recruiting & Managing a Global, Diverse & Skilled Workforce		
TC-SI-230a.1	Percentage of employees that are (1) foreign nationals and (2) located offshore	As of December 31, 2022, 5% of our U.S. employees are foreign nationals, and 50% of our employees are located offshore. Our success and competitiveness depend on our ability to retain, attract, motivate, and strategically locate in our offices around the globe, talented employees, including some of our key executives.
TC-SI-230a.2	Employee engagement as a percentage	In 2023, we plan to conduct an employee engagement survey. See the Human Capital Management section of this report for more information on our approach to employee engagement at PDF Solutions.
Managing Systemic Risks from Technology Disruptions		
TC-SI-550a.2	Description of business continuity risks related to disruptions of operations	See the Risk Management section for a description of our management approach to business continuity. Where material, risks related to business continuity are included in our Form 10-K .
Hazardous Waste Management		
RT-EE-150a.2	Number and aggregate quantity of reportable spills, quantity recovered	We did not have any reportable spills in our operations.

SASB Code	Accounting Metric	Response
Environmental Footprint of Hardware Infrastructure		
TC-SI-130a.1 RT-EE-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	(1) 4,108 GJ (2) 100% of our electricity is supplied from grid electricity (3) We do not currently purchase renewable energy.
TC-SI-130a.2	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Water is a critical sustainability challenge for our customers in the semiconductor industry but is not material in our own operations. Our largest facilities are located in areas with low levels of water stress, and we do not use water in our product development and manufacturing processes.
Data Security		
TC-SI-230a.1	(1) Number of data breaches, (2) percentage involving personally identifiable information (PII), (3) number of users affected	We did not experience any material data breaches in 2022. When public disclosure criteria are met, material data breaches are included in our most recent Annual Report on Form 10-K and subsequent 10-Q filings.
TC-SI-230a.2	Description of approach to identifying and addressing data security risks, including use of third-party cybersecurity standards	We maintain a robust approach to identifying and addressing data security risks. See the Data Security and Privacy section of this ESG report, our 2023 Proxy Statement, and our most recent Annual Report on Form 10-K , <i>Risks Related to Our Technology</i> page 20 for more information.
Product Safety		
RT-EE-250a.1	Number of recalls issued, total units recalled	In 2022, we did not have any product recalls.
RT-EE-250a.2	Total amount of monetary losses as a result of legal proceedings associated with product safety	In 2022, we did not have any material monetary losses as a result of legal proceedings associated with product safety. When public disclosure criteria are met, monetary losses as a result of legal proceedings are included in our Form 10-K .
Product Lifecycle Management		
RT-EE-410a.3	Revenue from renewable energy-related and energy efficiency-related products	Our products can help improve the time-to-market and yield for our customers, with significant indirect benefits regarding the use energy, water, and silicon, and significant indirect impacts on waste and greenhouse emissions. We intend to work to identify and measure the direct environmental benefits to our customers of use of our solutions.
Materials Sourcing		
RT-EE-440a.1	Description of the management of risks associated with the use of critical materials	We are committed to responsible sourcing and have established processes to identify and assess conflict minerals in the supply chain and respond to risks. See our Responsible Sourcing section for a summary of our approach to ethical production and the protection of human rights in our supply chain, including requirements related to conflict minerals.

SASB Code	Accounting Metric	Response
Business Ethics		
RT-EE-510a.1	Description of policies and practices for prevention of: (1) corruption and bribery and (2) anti-competitive behavior	<p>We have a Code of Ethics that contains policies against corruption, bribery, and competitive behavior. We also have a Side Letter Policy to prevent undocumented promises to customers.</p> <p>See our Code of Ethics and the Business Ethics and Compliance section of this report for a summary of our policies and practices for the prevention of corruption and bribery and anti-competitive behavior.</p>
RT-EE-510a.2	Total amount of monetary losses as a result of legal proceedings associated with bribery or corruption	In 2022, we did not have any monetary losses as a result of legal proceedings associated with bribery or corruption. When public disclosure criteria are met, monetary losses as a result of legal proceedings are included in our Form 10-K .
RT-EE-510a.3 TC-SI-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	In 2022, we did not have any monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations. When public disclosure criteria are met, monetary losses as a result of legal proceedings are included in our Form 10-K .